INTELLIGENT SPEED DOME
USER'S MANUAL

Please read the manual in detail before using the product!
Please obey all the rules of operation!

Speed Dome of Security & Safety of IP System

CE FC RoHS

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Solemn Declaration

While writing this manual, we've been very cautious and prudent in order to guarantee the credibility of all the information provided here. However, if there exists any error, your precious advice and correction will be greatly appreciated. Meanwhile, the misinterpretation of this manual is not controllable, so we are not responsible for the accidents and the damage caused by misunderstanding this manual, the damage to the third party and thereby the compensation claimed by the third party and the deletion and loss of information and thereby other indirect loss caused by incorrect software operation, maintenance or other accidental situations.

The distribution and marketing must be conducted by the original purchaser under the items of permission agreement. No company or individual is allowed to copy or duplicate the whole or part of this product, or convert it into other electronic media readable by other machines.

Any modification of the manual is not likely to be otherwise stated.

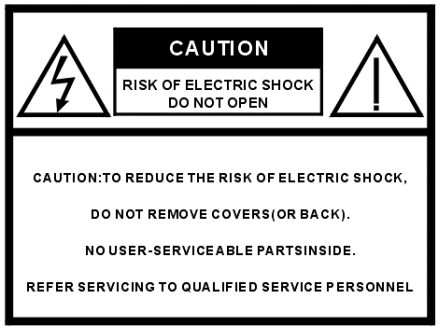
Please base on the software when any mismatch for this manual caused by software upgrading occurs.

Please read the user's manual carefully before using the product.

Make sure that your operation is complied with the operation procedure.

SPEED DOME CAMERA

The Installatlon of this product should be made by quallfied servlce personnel and should conform to all local codes.


CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN
CAUTION:TO REDUCE THE RISK OF ELECTRIC SHOCK,
DO NOT REMOVE COVERS(OR BACK).
NO USER-SERVICEABLE PARTSINSIDE.
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL

Warning:this product generates,uses,and can radiatre radio frequency energy and if not installed and used in accordance with the instructions manual,may canse interference to radio communications.it has been tested and found to comply with the limits for a class A computing device pursuant to Part 15 of FCC Rules,which are designed to provide reasonable protection against such interference when operated in a commercial environment. Operation of this product in a residential area is likely to cause interference in which case the user at his own expense will be required to take whatever measures may be required to correct the interiernce.

The lightning flash with arrowhead Symbol,with in an equilateral triangle, is intended to alert the user to the presence of unInsulated dangerous voltage wlth in the products enclosure that may be of sufficlent magnltude to constltutea rlsk of electrlc shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operatlng and maintenance(servicing) instructlons in the lterature accompanying the product.

UNPACKING AND INSPECTION

Unpack carefully.This is an electronlc product andshould be handled as such. Compare the Items received with the packing list with your order.

Be sure to save:

1. The shipping cartons and insert pieces.they are the safest material in which to make future shipments of the product.
2. the important safeguards sheet.
3. these instal lation and operating instructions.

MAINTENANCE

user maintenance of this unit is limited to external cleaning and inspection.for specific recommendations refer to the IMPORTANT safeguards sheet packaged with this product.

INSTALLATION AND SERVICE

if you require information during installation of this product or if service seems necessary, contact our repair and service department you must dotain a return authorization number and shipping instructions before returning any product for service.

Do not attempt to service this product your self.opening or removing covers may expose you to dangerous voltages or other hazards refer all servicing to quallfied personnel

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Part 1 NOTICE

1.Handle with care while transportation.

Do not abuse the camera. Avoid pressing striking, shaking, etc. The camera could be damaged by improper handling or storage.

2.How to deal with malfunction

If smoke or unusual smell comes out or malfunction occurs, SHUT DOWN the power, STOP using the camera. Ask a qualified service person for servicing.

3. Do not attempt to disassemble the camera.

To prevent electric shock, do not remove screws or covers. There are no user serviceable parts inside. Ask a qualified service person for servicing.

4. Do Not put other objects into the camera

No metals or combustible materials inside. If water or other liquid floats in, SHUT DOWN the power immediately, and ask a qualified service person for servicing. Avoid raindrops and sea water.

5. Handle the camera with care while placing it

Do Not drop the camera or strike or shake it in 8. to avoid the unnecessary damage.

6. Install the camera where it's away from power source and magnetic fields.

Jamming pictures will be caused if the camera is installed near TV, radio, magnetic device, motor, transformer and loud-speaker, etc.

7. Avoid moisture, dust and high temperature

Do Not install the camera near smoke, steam, or dusty and over-heated places.

8. Do not use strong or abrasive detergents

when cleaning the camera body. Use a dry cloth to clean the camera when dirty. In case the dirt is hard to remove, use a mild detergent and wipe gently. Care should be taken not to scratch the dome when wiping it.

9. Never face the camera towards the sun, or it may damage the CCD.

10. Operate the camera under the required conditions

Warning: Do Not install the indoor speed dome outdoors.

Indoor speed dome	Outdoor speed dome
Temperature: -10~ 50° C	Temperature: -40~55° C
Humidity:<90%	Humidity:<90%
KPA::86-106kpa	KPA::86-106kpa
AC: 24v/1.5A 50/60Hz	AC : 24v/3.0A 50/60Hz

Part 2 Product features

1.Auto-recognition zoom camera

- Our Intelligent speed dome is auto-recognizable for SONY, HITACHI, SANYO, SAMSUNG, LG, CNB, CANON etc. and some domestic zoom cameras. (Other zoom cameras should provide their protocols)

2.Built-in Decoder/PAN/TILT

- Adopt the ARM design of high performance with high, stable stability. Setting data will not be lost when power-off.

Address Code	Address Switch 1 2 3 4 5 6 7 8		Address Code	Address Switch 1 2 3 4 5 6 7 8
195	1 1 0 0 0 0 1 1		226	0 1 0 0 0 1 1 1
196	0 0 1 0 0 0 1 1		227	1 1 0 0 0 1 1 1
197	1 0 1 0 0 0 1 1		228	0 0 1 0 0 1 1 1
198	0 1 1 0 0 0 1 1		229	1 0 1 0 0 1 1 1
199	1 1 1 0 0 0 1 1		230	0 1 1 0 0 1 1 1
200	0 0 0 1 0 0 1 1		231	1 1 1 0 0 1 1 1
201	1 0 0 1 0 0 1 1		232	0 0 0 1 0 1 1 1
202	0 1 0 1 0 0 1 1		233	1 0 0 1 0 1 1 1
203	1 1 0 1 0 0 1 1		234	0 1 0 1 0 1 1 1
204	0 0 1 1 0 0 1 1		235	1 1 0 1 0 1 1 1
205	1 0 1 1 0 0 1 1		236	0 0 1 1 0 1 1 1
206	0 1 1 1 0 0 1 1		237	1 0 1 1 0 1 1 1
207	1 1 1 1 0 0 1 1		238	0 1 1 1 0 1 1 1
208	0 0 0 0 1 0 1 1		239	1 1 1 1 0 1 1 1
209	1 0 0 0 1 0 1 1		240	0 0 0 0 1 1 1 1
210	0 1 0 0 1 0 1 1		241	1 0 0 0 1 1 1 1
211	1 1 0 0 1 0 1 1		242	0 1 0 0 1 1 1 1
212	0 0 1 0 1 0 1 1		243	1 1 0 0 1 1 1 1
213	1 0 1 0 1 0 1 1		244	0 0 1 0 1 1 1 1
214	0 1 1 0 1 0 1 1		245	1 0 1 0 1 1 1 1
215	1 1 1 0 1 0 1 1		246	0 1 1 0 1 1 1 1
216	0 0 0 1 1 0 1 1		247	1 1 1 0 1 1 1 1
217	1 0 0 1 1 0 1 1		248	0 0 0 1 1 1 1 1
218	0 1 0 1 1 0 1 1		249	1 0 0 1 1 1 1 1
219	1 1 0 1 1 0 1 1		250	0 1 0 1 1 1 1 1
220	0 0 1 1 1 0 1 1		251	1 1 0 1 1 1 1 1
221	1 0 1 1 1 0 1 1		252	0 0 1 1 1 1 1 1
222	0 1 1 1 1 0 1 1		253	1 0 1 1 1 1 1 1
223	1 1 1 1 1 0 1 1		254	0 1 1 1 1 1 1 1
224	0 0 0 0 0 1 1 1		255	1 1 1 1 1 1 1 1
225	1 0 0 0 0 1 1 1			

Address Code	Address Switch		Address Code	Address Switch
	1 2 3 4 5 6 7 8			1 2 3 4 5 6 7 8
123	1 1 0 1 1 1 1 0		159	1 1 1 1 1 0 0 1
124	0 0 1 1 1 1 1 0		160	0 0 0 0 0 1 0 1
125	1 0 1 1 1 1 1 0		161	1 0 0 0 0 1 0 1
126	0 1 1 1 1 1 1 0		162	0 1 0 0 0 1 0 1
127	1 1 1 1 1 1 1 0		163	1 1 0 0 0 1 0 1
128	0 0 0 0 0 0 0 1		164	0 0 1 0 0 1 0 1
129	1 0 0 0 0 0 0 1		165	1 0 1 0 0 1 0 1
130	0 1 0 0 0 0 0 1		166	0 1 1 0 0 1 0 1
131	1 1 0 0 0 0 0 1		167	1 1 1 0 0 1 0 1
132	0 0 1 0 0 0 0 1		168	0 0 0 1 0 1 0 1
133	1 0 1 0 0 0 0 1		169	1 0 0 1 0 1 0 1
134	0 1 1 0 0 0 0 1		170	0 1 0 1 0 1 0 1
135	1 1 1 0 0 0 0 1		171	1 1 0 1 0 1 0 1
136	0 0 0 1 0 0 0 1		172	0 0 1 1 0 1 0 1
137	1 0 0 1 0 0 0 1		173	1 0 1 1 0 1 0 1
138	0 1 0 1 0 0 0 1		174	0 1 1 1 0 1 0 1
139	1 1 0 1 0 0 0 1		175	1 1 1 1 0 1 0 1
140	0 0 1 1 0 0 0 1		176	0 0 0 0 1 1 0 1
141	1 0 1 1 0 0 0 1		177	1 0 0 0 1 1 0 1
142	0 1 1 1 0 0 0 1		178	0 1 0 0 1 1 0 1
143	1 1 1 1 0 0 0 1		179	1 1 0 0 1 1 0 1
144	0 0 0 0 1 0 0 1		180	0 0 1 0 1 1 0 1
145	1 0 0 0 1 0 0 1		181	1 0 1 0 1 1 0 1
146	0 1 0 0 1 0 0 1		182	0 1 1 0 1 1 0 1
147	1 1 0 0 1 0 0 1		183	1 1 1 0 1 1 0 1
148	0 0 1 0 1 0 0 1		184	0 0 0 1 1 1 0 1
149	1 0 1 0 1 0 0 1		185	1 0 0 1 1 1 0 1
150	0 1 1 0 1 0 0 1		186	0 1 0 1 1 1 0 1
151	1 1 1 0 1 0 0 1		187	1 1 0 1 1 1 0 1
152	0 0 0 1 1 0 0 1		188	0 0 1 1 1 1 0 1
153	1 0 0 1 1 0 0 1		189	1 0 1 1 1 1 0 1
154	0 1 0 1 1 0 0 1		190	0 1 1 1 1 1 0 1
155	1 1 0 1 1 0 0 1		191	1 1 1 1 1 1 0 1
156	0 0 1 1 1 0 0 1		192	0 0 0 0 0 0 1 1
157	1 0 1 1 1 0 0 1		193	1 0 0 0 0 0 1 1
158	0 1 1 1 1 0 0 1		194	0 1 0 0 0 0 1 1

- Precision stepper electrode drive smooth operation, accurate positioning
- Infinitely variable speed Continuous 360°pan, tilt turning(180° auto flip), without any blind area.
- Automatic identification PELCO-D, PELCO-P Control Protocol
- Automatic identification Baud rate 2400,4800,9600
- Broadcast address 255 and Invalid address 0, Convenient control
- Software address ,Software Baud rate ,Software Protocol function ,Convenient setting
- 256 preset positions, 5 automatic programmable cruising function which can store 16 presets, including guarding point, cruising group,
- 4 tracking record, 8privacy protecting area and 8 area indication, etc.
- 3 different Optional speed cruising function
- RS485 control bus

3.Build-in digital color camera

- Integrated digital processing camera with high sensitivity and high resolution.
- Auto focus, auto aperture, auto brightness compensation ,auto White Balance.
- Auto color/grayscale picture change, auto backlight supplement and auto shutter.

Part 3【Function description】

This section only mentions main functions and their operation principles , the detailed operation will be in other section..

1.Target tracking

Users can control the moving direction of lens by pushing joystick up and down, left and right to trace the target or change the view-angles. The size of visual angle or target image can be adjusted by changing focus.

2.Focus length/auto matching technology of rotation speed

In the situation where focal length is long, the image will be easily distorted because speed dome responses so fast that even a slight touch of joystick could make the picture shift rapidly. Based on people-oriented design, this speed dome camera can automatically adjust pan and vertical speed according to the focal length to make the manual trace operation easier.

3.Auto-rotate

If operator keeps pressing the joystick after reaching the limitation in vertical direction, the lens would automatically rotate 180°, so we can monitor the hind-scene

4.Set and transfer preset

Preset is a function that we can store parameters like the angle of PAN and the length of focus in the memory, and the speed dome could adjust itself to reach the angle of PAN and the length of focus when you transfer the preset.

5. Tour

Automatic tour, which arranges presets in the desired order and interval by programming, is a build-in function of this intelligent speed dome. With a command, the camera of speed dome would tour automatically and continuously according to the route and interval preprogrammed.

6.Auto-- scan

The high speed dome camera can automatically and repeatedly scan 360°at both high speed and slow speed.

7.Limit scan

To set the starting point of limit scan by using the start command in the control keyboard, and then use the

joystick to move to the end point of limit scan at a certain speed. After calling the limit scan, camera will automatically scan between the start and end points at the speed of joystick moving.

8.Guarding point

Guarding point is a function that if there is no operation for a long time, dome camera would be back to an important preset position. It usually takes about 3-254 seconds before the start or stop of guarding point function.

9.Track record route patterns

4 tour route patterns at most. Each route can continuously record the controlling operation of the PAN and camera within at least 1 minutes.

10. Privacy protection area setting（This function is related with camera）

Users can cover at most 8 privacy protection areas with black shadow through this setting.

11. Area Indication Function

Users can indicate at most eight areas with titles through this setting. A title will be displayed automatically when the camera move to an indicated area. Note: Function 9, 10 and 11 are only applied to the speed dome with menu

12.Lens control

a、Focus length control： Users would get a panorama or close-up pictures by controlling the keyboard to adjust focal length.

b、Focus control:

Auto-focus is included in system default. When zooming, camera will focus in the center of picture to keep the picture clear. Under special circumstances, focus can be done by manual drive.

Please refer to your equipment control manual in terms of specific operation.

※NOTE: Camera can NOT automatically focus in the following situation:

◆Target is not the center of the screen.

◆Clear picture of target would not be guaranteed when observing them both in the distance and close-up at the same time

◆Target can't be a strong light object, such as neon light and spotlight

◆Target moves too fast

◆Target is too dark or blur

c、Aperture control:

Auto-IRIS is included in system default. Camera adjusts IRIS according to the change of environmental light to stabilize images. Auto aperture is advised.

※NOTE: When aperture is in manual control , speed dome will automatically lock the current position of manual status, and it would not restore auto aperture status even when the scene is changed .

d、Auto backlight compensation

Auto-backlight compensation is achieved respectively in 6 zones. Camera automatically implements light compensation, which can help camera get a clear image, when black target in a strong light background, and to avoid the background being too bright while the target being too dark.

e、Auto White Balance:

Self-adjust according to the change of environmental light, reappearing true color.

Address Code	Address Switch 1 2 3 4 5 6 7 8		Address Code	Address Switch 1 2 3 4 5 6 7 8
51	1 1 0 0 1 1 0 0		87	1 1 1 0 1 0 1 0
52	0 0 1 0 1 1 0 0		88	0 0 0 1 1 0 1 0
53	1 0 1 0 1 1 0 0		89	1 0 0 1 1 0 1 0
54	0 1 1 0 1 1 0 0		90	0 1 0 1 1 0 1 0
55	1 1 1 0 1 1 0 0		91	1 1 0 1 1 0 1 0
56	0 0 0 1 1 1 0 0		92	0 0 1 1 1 0 1 0
57	1 0 0 1 1 1 0 0		93	1 0 1 1 1 0 1 0
58	0 1 0 1 1 1 0 0		94	0 1 1 1 1 0 1 0
59	1 1 0 1 1 1 0 0		95	1 1 1 1 1 0 1 0
60	0 0 1 1 1 1 0 0		96	0 0 0 0 0 1 1 0
61	1 0 1 1 1 1 0 0		97	1 0 0 0 0 1 1 0
62	0 1 1 1 1 1 0 0		98	0 1 0 0 0 1 1 0
63	1 1 1 1 1 1 0 0		99	1 1 0 0 0 1 1 0
64	0 0 0 0 0 0 1 0		100	0 0 1 0 0 1 1 0
65	1 0 0 0 0 0 1 0		101	1 0 1 0 0 1 1 0
66	0 1 0 0 0 0 1 0		102	0 1 1 0 0 1 1 0
67	1 1 0 0 0 0 1 0		103	1 1 1 0 0 1 1 0
68	0 0 1 0 0 0 1 0		104	0 0 0 1 0 1 1 0
69	1 0 1 0 0 0 1 0		105	1 0 0 1 0 1 1 0
70	0 1 1 0 0 0 1 0		106	0 1 0 1 0 1 1 0
71	1 1 1 0 0 0 1 0		107	1 1 0 1 0 1 1 0
72	0 0 0 1 0 0 1 0		108	0 0 1 1 0 1 1 0
73	1 0 0 1 0 0 1 0		109	1 0 1 1 0 1 1 0
74	0 1 0 1 0 0 1 0		110	0 1 1 1 0 1 1 0
75	1 1 0 1 0 0 1 0		111	1 1 1 1 0 1 1 0
76	0 0 1 1 0 0 1 0		112	0 0 0 0 1 1 1 0
77	1 0 1 1 0 0 1 0		113	1 0 0 0 1 1 1 0
78	0 1 1 1 0 0 1 0		114	0 1 0 0 1 1 1 0
79	1 1 1 1 0 0 1 0		115	1 1 0 0 1 1 1 0
80	0 0 0 0 1 0 1 0		116	0 0 1 0 1 1 1 0
81	1 0 0 0 1 0 1 0		117	1 0 1 0 1 1 1 0
82	0 1 0 0 1 0 1 0		118	0 1 1 0 1 1 1 0
83	1 1 0 0 1 0 1 0		119	1 1 1 0 1 1 1 0
84	0 0 1 0 1 0 1 0		120	0 0 0 1 1 1 1 0
85	1 0 1 0 1 0 1 0		121	1 0 0 1 1 1 1 0
86	0 1 1 0 1 0 1 0		122	0 1 0 1 1 1 1 0

Part 12【code Switch setting table 】

1. SW2 IP address setting table

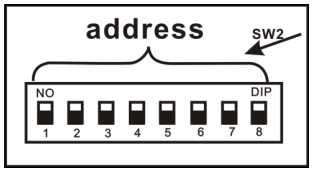


Figure43

In the following table "1" stand for "ON" position in IP address switch."0" stand for "OFF" position in IP address switch.

Address Code	Address Switch 1 2 3 4 5 6 7 8		Address Code	Address Switch 1 2 3 4 5 6 7 8
1	1 0 0 0 0 0 0 0		26	0 1 0 1 1 0 0 0
2	0 1 0 0 0 0 0 0		27	1 1 0 1 1 0 0 0
3	1 1 0 0 0 0 0 0		28	0 0 1 1 1 0 0 0
4	0 0 1 0 0 0 0 0		29	1 0 1 1 1 0 0 0
5	1 0 1 0 0 0 0 0		30	0 1 1 1 1 0 0 0
6	0 1 1 0 0 0 0 0		31	1 1 1 1 1 0 0 0
7	1 1 1 0 0 0 0 0		32	0 0 0 0 0 1 0 0
8	0 0 0 1 0 0 0 0		33	1 0 0 0 0 1 0 0
9	1 0 0 1 0 0 0 0		34	0 1 0 0 0 1 0 0
10	0 1 0 1 0 0 0 0		35	1 1 0 0 0 1 0 0
11	1 1 0 1 0 0 0 0		36	0 0 1 0 0 1 0 0
12	0 0 1 1 0 0 0 0		37	1 0 1 0 0 1 0 0
13	1 0 1 1 0 0 0 0		38	0 1 1 0 0 1 0 0
14	0 1 1 1 0 0 0 0		39	1 1 1 0 0 1 0 0
15	1 1 1 1 0 0 0 0		40	0 0 0 1 0 1 0 0
16	0 0 0 0 1 0 0 0		41	1 0 0 1 0 1 0 0
17	1 0 0 0 1 0 0 0		42	0 1 0 1 0 1 0 0
18	0 1 0 0 1 0 0 0		43	1 1 0 1 0 1 0 0
19	1 1 0 0 1 0 0 0		44	0 0 1 1 0 1 0 0
20	0 0 1 0 1 0 0 0		45	1 0 1 1 0 1 0 0
21	1 0 1 0 1 0 0 0		46	0 1 1 1 0 1 0 0
22	0 1 1 0 1 0 0 0		47	1 1 1 1 0 1 0 0
23	1 1 1 0 1 0 0 0		48	0 0 0 0 1 1 0 0
24	0 0 0 1 1 0 0 0		49	1 0 0 0 1 1 0 0
25	1 0 0 1 1 0 0 0		50	0 1 0 0 1 1 0 0

Part 4【Installation preparation】

1.Basic requirements

- All electrical work should comply with the latest local electrical regulations, fire-proof pre cautions and other relative legislations and regulations.
- Check whether accessories are as complete as the packing list shows. If not, please contact the supplier.
- Make sure that the place where it's applied and installed meets the requirements of installation.

2.Check the structure of the place of installation.

- Make sure that there is enough room to install this product and its accessories.
- Make sure that the ceiling, wall and bracket where this product is installed should be able to endure 4 times as heavy as speed dome.

3. Set DIP switch

- Set DIP switch according to speed dome IP address (Detailed information refers to page 30)
- Setting IP address by software address refers to page 21【Communication settings】

4.Please keep all the packing material of dome

Please keep the packing material of dome after taking apart the package. If problems occur, please re-pack it with the original package and send it back to manufacturer.

※NOTE: Non-original package will cause the unexpected damage during transportation.

Part 5【Installation Guidance】

A、 Intelligent speed dome camera mainly has three types of installations:

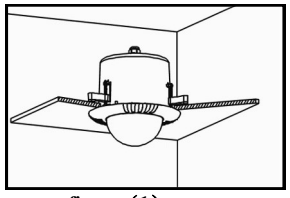
①:insert type; ②:ceiling type; ③:rack mounting

B、 In according to installation type, there are three ways on rack mounting below :

①:wallhung type ②:column type ③:lifting type

Rack mounting fits for indoor or outdoor installation. Outdoor dome camera has an extra sun-shade shell. Dome camera IP rate is 66.

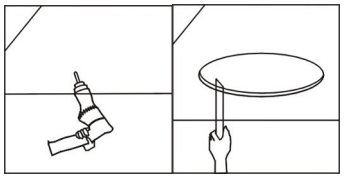
1、Dome-Insert Installation conditions:



figure（1）

Insert dome camera is applied to indoor ceiling setting

(1) At least 200mm above the ceiling
(2) ceiling thickness is 5mm—42mm
(3) ceiling must bear 4 times the weight of camera at least.

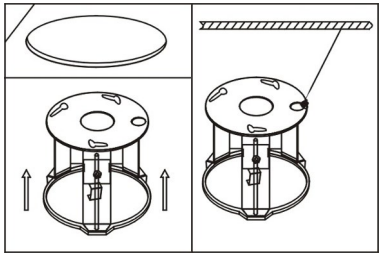


figure（2）

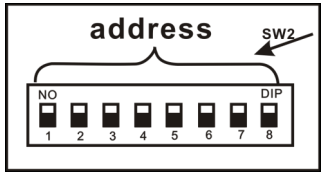
Step a. Drill a hole in the ceiling

(1) Use proper tools to drill a hole with 3mm diameter in the center of installation place. On one side of the hole twist a self-drilling screw and fix it on the ceiling.

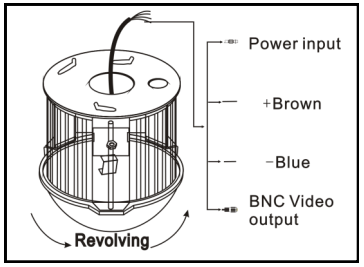
(2) Draw a circle with pencil in ceiling, and then remove the material inside the circuit.



figure（3）



figure（4）



figure（5）

Step b. Install ceiling mount

(1) First, keep pushing the ceiling mount into the hole in the ceiling until the mount is totally inside the hole. Second, unfold the three brackets and screw them up. Last, when the metal pieces are fully expanded, tighten the screws to fix the mount into ceiling firmly.

Warning: A steel safe belt must be used between ceiling mount and ceiling to avoid that speed dome accidentally drops. Safe belt should be provided by user .

Step c. Set speed dome

(1) Set (DIP switches) SW2 under the bottom of dome machine to control speed dome IP address. (Detailed information can be found in PART 12)

(2) Without SW2 DIP switches , setting the IP address by software address refer to Page21【Communication settings】

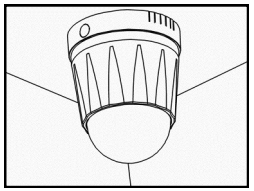
Step d. Connect dome lines

(1) Put video line, power supply line and signal control line through the round hole in the ceiling mount, and connect the lines with the corresponding places in dome.(The type of wire is shown as figure 5)

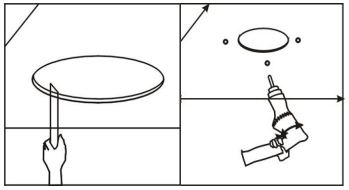
Steps e. Dome installation

(1) Insert the three screws which are in the bottom of dome into the holes in ceiling mount, and then turn the mount as figure 5 shows to make sure that the screws are inside positioning slot firmly.

2、Ceiling-mounted installation：



figure（6）



figure（7）

Installation conditions:

This installation way is applied to stiff ceiling indoor

(1) The thickness of ceiling must be enough to set up the screws

(2) Ceiling must bear 4 times the weight of camera at least.

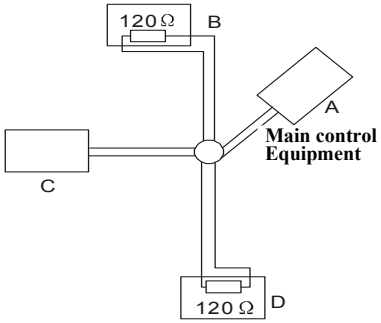
Step a. drill a hole in the ceiling

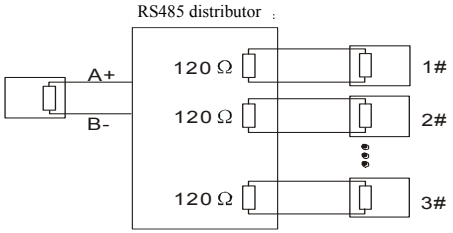
(1) Draw a circle according to the size of hole with a pencil in ceiling, and then remove the material inside the circuit.

(2) Drill three holes around the hole in the ceiling according to the corresponding position in the mount and insert setscrews in each hole. (Setscrews should be provided by users).

4.Problems in practical use :

- In the real construction, user often adopts y-junction connection mode whose terminal impedance are connected between the two farthest equipments (as B and D in figure 21). But it doesn't comply with the use requirement of RS485 industrial standard, so it will lower the reliability of control signal by causing the problems such as signal reflection and a weaker anti-interference ability when there is long distance among every equipment. Its syndrome is like that speed dome can't be controlled completely or intermittently or keeps running even if it's stopped. We advise user to use RS485 allotter which can avoid problems and increase the communication reliability in the situation mentioned above by change y-junction mode to the connection mode complying with RS485 industrial standard.





5. Wires Recommended

1). 24V power supply connection distance and cable material requirement:

Power supply cable diameter	0.5mm² (20#)	1.0mm²(18#)	1.5mm²(16#)	2.5mm²(14#)
Indoor speed dome 72W power supply	25m(94ft)	45m(150ft)	70m(238ft)	110m(380ft)
Outdoor speed dome 72W power source	10m(37ft)	18m(60ft)	28m(95ft)	45m(152ft)

2). Requirement of video cable:

Model	Max transmitting distance	Model	Max transmitting distance
75-5	370M	75-2	150M
75-7	500M	75-3	200M
75-9	680M	75-4	270M

NOTE: The same mode cable produced by different manufacturer may differ. The table above simply mentions the average reference distance of video cable transmitting .

Part11【Common Knowledge on RS485 control bus】

1. Basic features of RS485 control bus：

- RS485 control bus is a half duplex communication bus whose impedance is 120Ω. Its load capacity differs in the different connection interface, IC is 32-128 valid load (including main control equipment and controlled equipments).

2. RS485 control bus transmitting distance:

- When using 0.56mm(24AWG) twisted pair line as the communication electric cable, the maximal transmission distances differ in different Baud rate setting. Maximum transmission distances and corresponding Baud rates are shown in following table:

Baud rate	Maximum distance	Baud rate	Maximum distance
2400BPS	1800m	4800BPS	1200m
9600BPS	800m	19200BPS	600m

- The max transmission distance would be shortened in conditions like: when a slim communication cable is used or the speed dome is used in the environment with strong electromagnetic interference or there are many equipments connected to control bus, vice versa.

3. Connect mode and terminal impedance

- The RS485 industry control bus requires daisy-chain connection mode between equipments, and 120Ω terminal impedances should be connected at each end. The mode is shown in figure 41. Simplified connection mode is shown in figure 42.The distance of D must be less than 23 feet (7 meters).

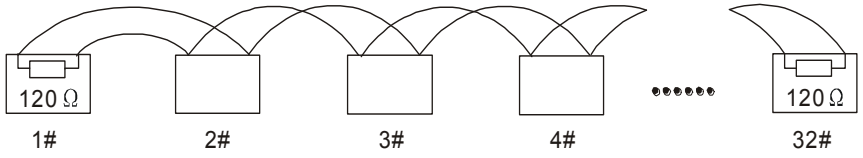


Figure41

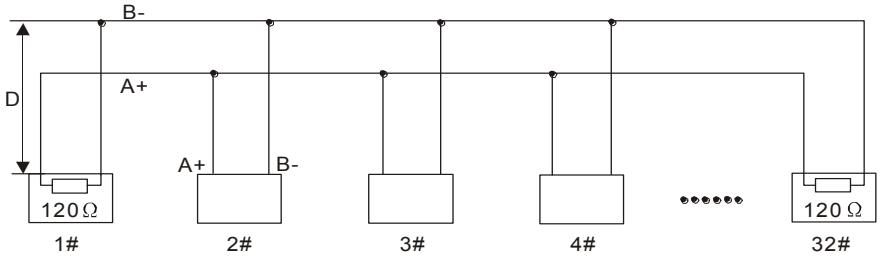
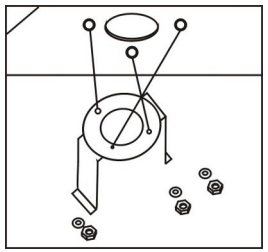
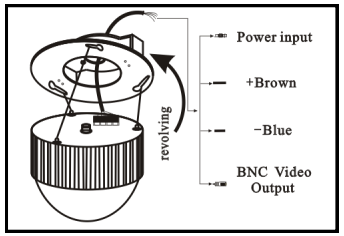


Figure42



figure（8）



figure（9）

Step b. fix ceiling mount

There are two connection ways:

One is from center hole, the other is from the hole beside

(1)Make sure the installation position and the connection way. Insert the three setscrews in the holes respectively, and then fasten the screws with gasket and screw cap.(Take the example of putting the wire through the center of ceiling mount)

Step c. Set speed dome

(1) Set (DIP switches) SW2 under the bottom of dome machine to control speed dome IP address. (Detailed information can be found in PART 12)

(2) Without SW2 DIP switches , setting the IP address by software address refer to Page21【Communication settings】

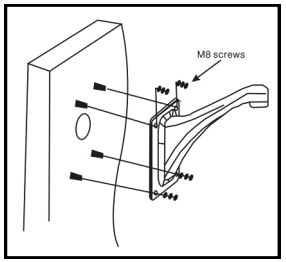
Step d Line connection:

(1) Put video line, power supply line and signal control line through the round hole in the ceiling mount. (The type of wire is shown as figure 9)

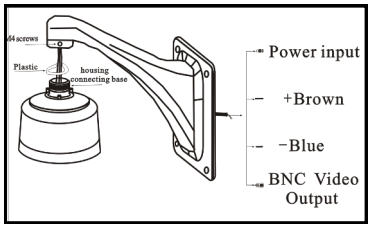
Steps e. Dome installation

Insert the three setscrews which are in the bottom of dome into the holes in the ceiling mount, and then turn the mount as figure 9 shows to make sure that the screws are inside positioning slot firmly.

3、Wall-hung installation



figure（10）



figure（11）

Step a. . drill a hole on the wall.

(1)As shown in figure 10, taking the installation holes of bottom surface of wall bracket as the template, draw the drilling positions and drill the holes:

Step b. Install bracket and housing:

(1) Put the video lines, power lines and signal-control lines through the hollow tube of the wall mounting bracket as the figure 11 shows.

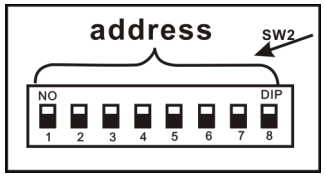
(2) Install the speed dome camera on the bracket , and fix it with 3 PCS screws.

(3) Fix the installed dome camera to the wall with bulgy screws.

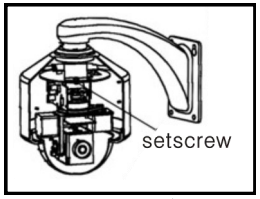
Note :if the camera is used for outdoor environment, please seal it to be waterproof.

① After winding enough PTFE tapes around the screw thread , screw the housing firmly to the wall mounting bracket

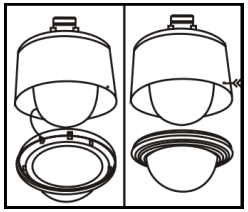
②Seal the joint face between wall and the bracket, holes, and the joint face between bracket and around the housing with silica gel to be waterproof.



Figure（12）



figure（13）



figure（14）

Step c. Set speed dome

(1) Set (DIP switches) SW2 under the bottom of dome machine to control speed dome IP address. (Detailed information can be found in PART 12）

(2) Without SW2 DIP switches ,setting the IP address by software address refer to Page21【Communication settings】

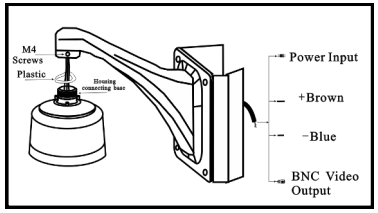
Step d. Install the speed dome core

(1). Hold the module with a hand, put the 2 waist-holes at the module bottom accordingly into the 2 screws of top bracket, and screw it to the bottom of the waist-holes. Screw the 2 screws firmly with a screwdriver.

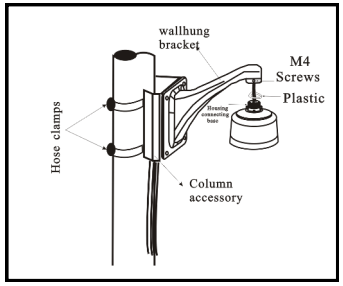
Step e. install dome

(1). Insert two setscrews which are in the bottom of dome into the waist-shape holes in top mount and turn the mount to make sure that two screws are in the positioning slot.

4、Pillar installation of dome：



figure（15）



figure（16）

Step a. Install pillar accessory

(1) Put the line though the pillar accessory and fix it with hose clamps.

(2) Install the dome on the bracket; fix it tightly with a 3PCS screw.

(3) Put the line though the wall bracket and fix it with column accessory together. (Shown as figure 15)

※NOTE: If the machine is installed outside, seal the speed dome to be water proof.

① Tape around the joint, and then fasten the housing.

② make sure the joint with silica gel to be waterproof

Step b. Install wall bracket

(1) Put the line though the wall bracket and fix it with column accessory together as figure 16 shows.

Step C. Set driver of dome: refer to the drive setting of wallhung dome on Page 10

Step D. Install the module : refer to the installation of wallhung dome module on Page 10

Step E. Install the lower housing : refer to the installation of lower housing of wallhung dome on Page 10

Part 10【Simple Trouble Shooting】

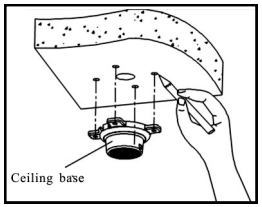
Breakdown phenomenon	Possible causes	Solution
Speed dome has no movement and there is no picture in monitor when power is on .	1. The end of 24V AC power supply isn't connected with speed dome correctly. 2. Power failure or transformer breakdown.	1. Check whether speed dome is connected to 24V AC power supply. Make sure that connection with sockets is well. 2. Check whether the city power supply is working well and whether 24V AC transformer works well.
After self testing, keyboard can't control speed dome.	1. IP address Switch of speed dome is set incorrectly. 2. Reverse connection and open/short circuit of RS485 control bus. 3. RS485 control bus breaks down.	1. Reset DIP switches according to DIP switch setting table. Make sure that the IP address speed dome is the same with that of keyboard. 2. Check connection of RS485 control bus and guarantee well and correct connection. 3. Refer to common knowledge of RS485 control bus .
Dome can be controlled but without working smoothly .	A. Bad connection of RS485. B. One line of RS 485 is off . C. Main machine is too far from dome. D. Too many parallel connections.	A. Reconnect RS485； B. Change another RS485； C. Install a terminal matching resistance； D. Install a RS485 distributor.
Blurry picture	1. Focus of speed dome is in the manual status. 2. Transparent lower dome gets dirty.	1. Change the manual focus status to auto focus status. Or call the preset to adjust the focus. 2. Clean transparent lower dome.
No self-testing ,or with noise	Power supply not enough	Replacement to meet the requirements of power
	Mechanical failure	Need to overhaul
There are the vertical direction of the roll bar on the monitor, when switching between cameras	Different phase of the camera power	If several speed dome camera is connected to the same transformer, the power supply connection in each speed dome camera to be the same, that is, the transformer at one end of the outlet must be connected to the terminal on the same side of each speed dome camera
The self-testing successfully but can not operate high-speed dome camera	Control lines reversed or open circuit	Check the wiring of control lines, to ensure that wiring is correct and good contact
	The address or protocol baud rate of the speed dome camera is not set correctly	Refer to the manual reset

Part 9【Technical Parameters】

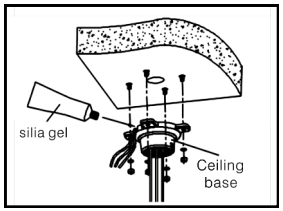
Power supply	AC24±5V，50Hz
Power consumption	Indoor speed dome: 15W　Outdoor speed dome: 50W
Decoder	Built-in
Synchronous mode	Inner synchronization
Video output	1.0vp-p
Focus Iris	Auto
Preset	256 Presets
Tour	5(Editable)
Guarding position	3-254 seconds (settable)
Pattern tracking record	5(Menu type has this function)
Privacy protection	8(Menu type has this function)
Area-indicative function	8(Menu type has this function)
Auto scan	2
Left or right limitation scan	359° adjustable
Auto-control of focal speed	Control speed automatically according to the length of focal length
Auto overturn	ON/OFF
Horizontal overturn scan	360° continuous overturn
Manual pan speed	Medium speed dome series 0.1°—120°/s
	High speed dome series 0.05°—240°/s
Vertical revolving range	Vertical 90°/180°
Vertical speed	Medium speed dome series 0.5-50°/s
	High speed dome series 0.1-150°/s
Control mode	RS485
Communication protocol	PELCO-D，PELCO-P automatic identification
Correspondence baud rate	2400/4800/9600bps　automatic identification
Address code	Hardware configuration and software configuration
Camera	Support all mainstream camera currently on the market
Ambient temperature	Indoor: - 10 +50□, outdoor: - 40 +55□

Technical parameter changes, without notice

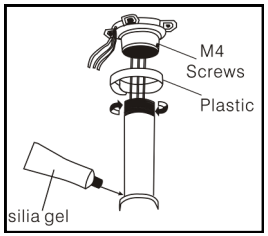
5、Lifting installation of dome:



figure（17）



figure（18）



figure（19）

Step a Drill holes on the ceiling

(1) Take the holes of the ceiling base as a template and mark the positions of the holes as figure 17 shows. Drill the holes and load with bulgy screws inside.

Step b Install dome camera

□ Put the video lines, power lines and signal-control lines through the hollow tube of hanger rod, and fasten the dome and the hanger rod.

□ Put the video lines, power lines and signal-control lines through the central holes at the hanger bottom and into the sealing groove at the side notch of the bottom of connecting base of the hanger, ad fasten the dome and the hanger rod as figure 18 shows

□ Fix the installed dome camera onto the ceiling.

Note: If dome is used outdoor, seal the joint face between the ceiling and the hanger base, and around the holes with silica gel to be waterproof. Tape around the screws at the top of hanger rod and fasten the hanger to the hanger bottom. As figure 19 shows,, seal the joint face between hanger joint sleeve and the hanger with silica gel to be waterproof.

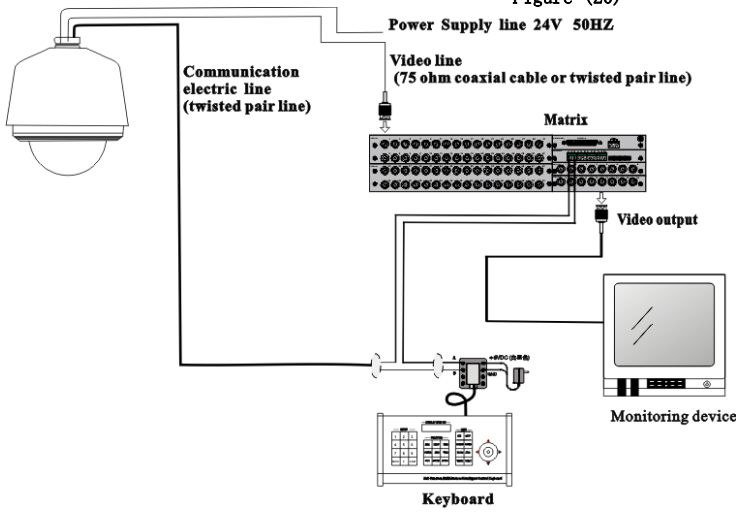
Step C. Set driver of dome: refer to the drive setting of wallhung dome on Page 10

Step D. Install the module : refer to the installation of wallhung dome module on Page 10

Step E. Install the lower housing : refer to the installation of lower housing of wallhung dome on Page 10

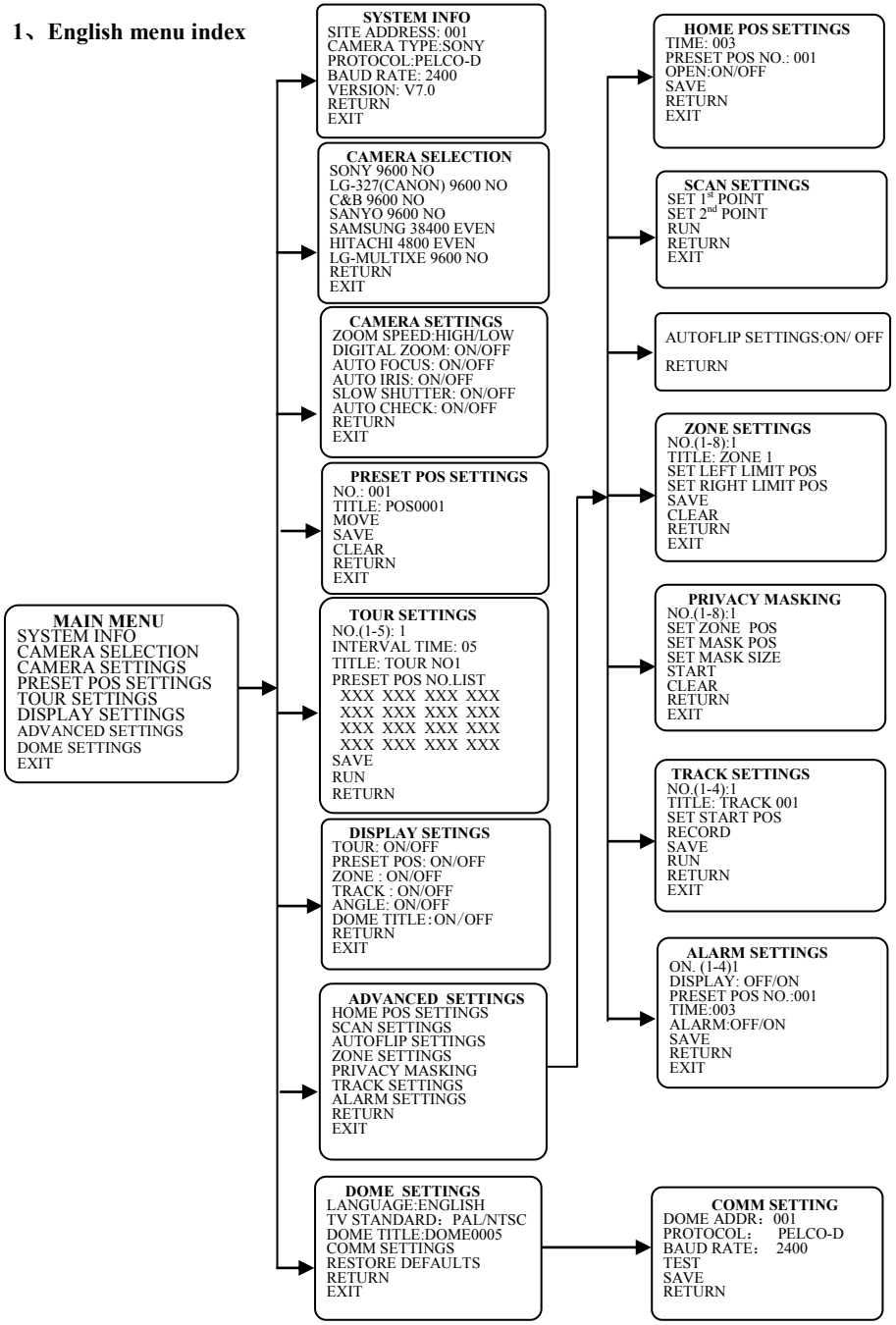
6、Product connection

Figure (20)



Part 6【Menu Setting of OSD system】

1、English menu index



Preset NO.	Speed dome / camera control content	Call preset	Set preset
131	Start the second track record（effective for menu camera）	¤	
132	Start the third track record（effective for menu camera）	¤	
133	Start the fourth track record（effective for menu camera）	¤	
135	Set video output format as PAL (effective for dome menu）	¤	
136	Set video output format as NTSC (effective for dome menu）	¤	
141	Set movement\ range of up and down of mini speed dome as 0-180°	¤	
142	Set movement range of up and down of mini speed dome as 0-90°	¤	
144	Setting the PTZ slow down 2 times corresponding to the zoom		¤
145	Setting the PTZ slow down 4 times corresponding to the zoom		¤
146	Setting the PTZ slow down 8 times corresponding to the zoom		¤
131	Setting software address		¤
148	Open the Camera boot initialized function		¤
149	Close the camera boot initialized function		¤
65	Enter OSD menu of speed dome	¤	
95	Enter OSD menu of speed dome		¤
95	Exist OSD menu of speed dome	¤	
111	Reset	¤	
150	Restore factory defaults	¤	
134	Enter menu (some camera available)	¤	
134	Exist menu (some camera available)		¤

8【Common functions operating Express】

Note: ¤ stands for effective function.

Preset NO.	Speed dome / camera control content	Call preset	Set preset
Menu or non menu program tour operation: （It's effective after entering OSD menu or referring to non-menu programming on Page 22）			
100	Start the first programmed tour	¤	
101	Start the second programmed tour	¤	
102	Start the third programmed tour	¤	
103	Start the fourth programmed tour	¤	
104	Start the fifth programmed tour	¤	
Easy tour operation：			
115	Start the first programmed tour 1-16 scanning	¤	
116	Start the second programmed tour17-32 scanning	¤	
117	Start the third programmed tour 33-48scanning	¤	
118	Start the fourth programmed tour 49-64scanning	¤	
119	Start the fifth programmed tour 65-80scanning	¤	
110	Left Limit position		¤
111	Right Limit position		¤
112	Call panning limit position	¤	
113	lens/over-turn auto-match Open	¤	
114	lens/overturn auto-match Off	¤	
120	Pan slowly	¤	
121	Pan quickly	¤	
121	Home position setting		¤
122	Start home position		¤
123	Stop home position		¤
123	Auto-overturn on	¤	
124	Auto-overturn off	¤	
125	open the SONY camera auto IR mode	¤	
126	close the SONY camera auto IR mode	¤	
127	Open the function that the IR led is controlled by the zoom camera	¤	
128	Close the function that the IR led is controlled by the zoom camera	¤	
137	IR-CUT on	¤	
138	IR-CUT off	¤	
139	User can switch small light and big lights of IR on or off according to the zoom of camera	¤	
140	Clear software configuration, and start hardware configura-tion or auto-protocol	¤	
130	Start the first track record（effective for menu camera）	¤	

2.Basic operation

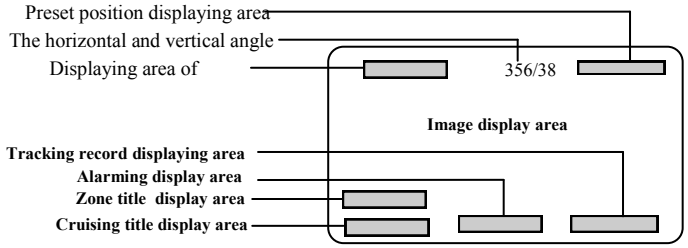
(1) Instruction：In order to make it easy to understand this operation, we make agreements as follows:

A) Through calling NO.65 present point or set up NO.95 preset point, the system enters main menu of OSD

B) When editing menu ,the up and down of joystick is used to select submenu and edit numerical value. The right and left of joystick will be used to enter or exit submenu .

C) All of setting data will not be lost when power is off.

D) The position of the equipment information is displayed on monitor as follows:



Introductions：

When preset position /scanning label displaying area displays PRESET XXX N/C, SCAN-N N/C ,it can indicate that the present point and left and right scans haven't been set up.

3.Power on and self-testing

(1) Self-testing procedure will be started after the power is on .The equipment can automatically identify integrated camera equipment first (Only limited to the integrated camera of HITACHI、SONY、LG、CNB、SANYO、SAMSUNG、CANON）, and then from horizontal rotating to primary horizontal point of factory defaults, and move down to primary vertical point. The camera lens will be tested from far-focusing to close-focusing and then from close-focusing to far-focusing. After self-testing, the screen will appear the relevant information as follows: (as shown in Figure 21)

Information
SITE ADDRESS：001
PROTOCOL :PELCO-D
BAVD RATE：2400

Figure （21）

4.Main menu description

(1) The system will enter into OSD main menu through calling No.65 preset point or set up No.95 preset point. (as shown in Figure 22)

MAIN MENU
SYSTEM INFO
CAMERA SELECTION
CAMERA SETTINGS
PRESET POS SETTINGS
TOUR SETTINGS
DISPLAY SETTINGS
OTHER SETTINGS
RESTORE DEFAULTS
EXIT

Figure （22）

5.System information setting

(1) System information view

Such as :Address code; Camera type; Communication protocol; Version number

SYSTEM INFO
SITE ADDRESS: 001
CAMERA TYPE：SONY
PROTOCOL TYPE: Pelco-D
BAUD RATE: 2400
VERSION: V7.0
RETURN
EXIT

Figure （23）

6. selecting camera

【SONY 9600 NO】SONY camera Baud rate 9600 No check digit

【LG-327(CANON) 9600 NO】LG-327 series or CANON camera Baud rate 9600 No check digit

【C&B 9600 NO】CNB camera Baud rate 9600 No check digit

【SANYO 9600 NO】SANYO camera Baud rate 9600 No check digit

【SAMSUNG 38400 ODD】Samsung 38400 odd number checking

【LG- MULTIXE 9600 NO】LG-MULTIXE series camera baud rate 9600 No check digit

【HITACHI 4800 EVEN】HITACHI camera baud rate 4800 even number checking

Figure (24)

(1) Ways to define the operation of the camera are as follows:

Grey shows the using camera, you can select the camera you wanted by moving the joystick up or down. Confirm the selected camera protocol by moving the joystick to the right . The selected camera can use the camera protocol and save it into EEPROM at the same time. When you open the equipment next time, it will use the camera you selected last time if the auto-check mode of the camera is off .If the auto-check mode is on, auto-check mode will be in operation and the camera that you selected last time won't be in use. The auto-check mode of the camera can be configured in camera setting menu

7.Lens parameters setting

(1) The system will enter main menu of OSD by calling No.65 preset point or setting up No.95 preset point. Moving up or down to point cursor at 【CAMERA SETTINGS】, then move the joystick right to enter lens parameters setting (shown as Figure 25)(Note: some functions can not be executed for some types of machines)

(1)If the auto check mode is off, it will use the camera you selected last time. However, if on, it will make auto check and do not use the camera you selected last time. Please note that the selection of camera will be configured in the selecting menu of camera.

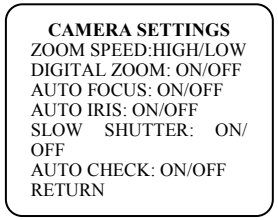


Figure (25)

(2) For more setting of cameras parameters , please press iris opening 【OPEN】or iris closing【CLOSE】 to menu setting of camera.**(Part of cameras have this function).**

8. Preset Position Setting

(1) When storing the parameters of level angle, angle of inclination, lens focus in the current state into preset points, you can call these parameters quickly and adjust the PTZ and camera to this position . The equipment can store 1-128 preset points at most.

(2) In Figure 22, moving the cursor up or down to 【PRESETS POS SETTINGS】, moving the joystick

Examples: Set the first tour group including 5 presets. The number of the five presets are 1 → 10 → 15 → 16 → 21, interval time is 6 seconds.

★Set NO.100 preset matching with the first tour (please refer to the section about how to set preset)

★Set NO. 6 preset corresponding to the interval time.

★Set NO.1 preset (NO.1 preset is added)

★Set NO. 10 preset (10 preset is added)

★Set NO.15 preset (NO.15 preset is added)

★Set NO.16 preset (NO.16 preset is added)

★Set NO.21 preset (NO.21 preset is added)

★Set NO.119 preset (exit the tour group programming)

6.Call Tour Group

Through calling preset 100, preset 101, preset 102, preset 103,and preset 104, tour group 1, 2, 3, 4 and 5 is called respectively.

For example: In the tour group 1, it contains 5 presets in the order like 1→ 10→15 → 16 → 21, and its interval time of every preset is programmed as 6 seconds**,**

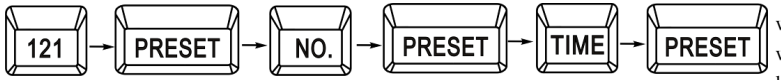
★Call preset 100 corresponding to tour 1 (please refer to the section about how to call preset). After calling tour 1, the speed dome camera will move like this: 1 → stay six seconds → 10 → stay six seconds → 15 → stay six seconds → 16 → stay six seconds → 21 → stay six seconds→1(repeat the tour)

2)If without programming, User can directly call preset positions No. 115, 116, 117, 118, 119 to execute simple tour group 1, 2, 3,4, 5. The system default time of this operation is 5 seconds. **Please refer to Page 24 for <<Easy tour operation>>.**

7. Home Position Setting

Home position is a function that speed dome camera automatically moves to a certain important preset position which is set in advance, if there's no operation within a period of time. The waiting time before entering home status can be set from 3 to 254 seconds.

◆ set a preset which you want as the home point



◆Set preset 121 to enter home position setting status:

◆Set preset 122 to start home position

◆Set preset 123 to delete home position

8.Left/right Limit Scan Setting

User can set the left scan limit and right scan limit to make speed dome scan within the limited scale.

Call the wanted camera to the monitor (Enter IP address of camera then press SHOT key)

Set preset 110 as left limit, and then move the joystick to the position where you want to set the right limit, and then set preset 111 as right limit. Finally, move back 30 degree to avoid the speed dome camera not

Part 7【Non Menu Operation Instruction】

These operating instructions cover the basic operations and features of the dome without involving with the specific operation of other control equipments of other companies. Different control equipments differ in specific operation methods. In terms of special requirements and operations, please contact the local distributor.

1. Control the up/down and left/right of camera

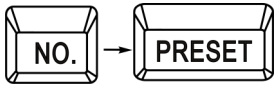
After selecting a camera, use the keyboard joystick to control the directions of the camera. The joystick control the movements of the camera. When the joystick turn to the right, the camera moves to the right. Similarly, when the joystick turn to the left, the camera also moves to the left. When the joystick moves vertically, the camera responds in the vertical direction. The camera can move horizontally and vertically simultaneously with moving direction of the joystick.

2.Auto scan

Call preset position 120 to start slow scan of horizontal **360°** . Call preset 121 to start fast scan of horizontal **360°** .

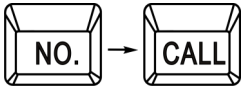
3. Preset Position Setting

Enter the preset position setting status，use the number key to input the camera number on which you want to set preset，then press SHOT and ON. (See the following figure)



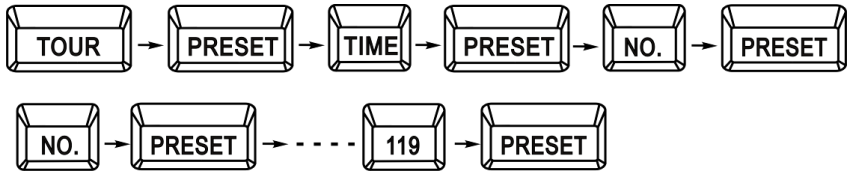
4.Call Preset Position

Enter the preset number and then press SHOT key to call the preset position you want, then the camera will immediately move to the preset position and automatically change to zoom, focus and aperture of the preset position you called.



5. Program Tour Group

- Five tour groups (100,101,102,103,104) are available in this product.
- Each tour group has 16 presets at least. If less than 16, the last preset number should be set 119, and then exit. If more than 16, system will automatically save the former 16 presets. The interval time must be set more than 3 seconds. If the interval time is less than 3 seconds, the system will automatically set 3 seconds as default interval time.



Detailed operation is showed in the following plan

【NO.: 001】Preset number:001

【MOVE】After setting positions，You need call No.65 or No.1 preset position to return to menu mode

PRESET POS SETTINGS
NO.: 001
TITLE: POS0001
MOVE
SAVE
CLEAR
RETURN
EXIT

Figure (26)

(3) Ways to define the operation of presets points :

A) Move the cursor to 【 NO.】，moving the joystick right to enter the selection of preset points. Select range 001-255. Please note that the following operations are only aimed at the current preset point .

B) Move the cursor to 【TITLE】，and move the joystick right to enter the setting of preset positions title. The title setting of preset positions contains 8 characters at most, and the supporting characters (0-9,A-Z,blank)。

C) Move the cursor to 【MOVE】，move the joystick to the right and select the preset position you need，and call No.65 or No.1［select' MOVE' to set up the position .(the arrow will become grey) When calling No.65 or 1 preset position is done, return to menu mode (the arrow becomes white)

D) Move the cursor to 【SAVE】，and then move the joystick to the right, and【SAVE】ending will display the current preset position number. When the display disappears , it indicates that the current preset position has been saved.

E) Move the cursor to 【CLEAR】，and then move right the joystick to the right.

9.Tour Setting of Preset Position

(1) Through this setting, it can arrange some scheduled preset positions into tour array in the order you need. With a command, the dome can auto-turn continuously within the given period of time according the sequence of the scheduled preset point. This machine can save 5 touring preset positions at most .Each touring route of preset position can save 16 preset points.

TOUR SETTING
NO.(1-5): 1
INTERVAL TIME: 05
TITLE: TOUR NO1
PRESET POS NO.LIST
XXX XXX XXX XXX
XXX XXX XXX XXX
XXX XXX XXX XXX
XXX XXX XXX XXX
SAVE
RUN
RETURN

Figure (27)

(2) The system enters main menu of OSD by calling No.65 preset position or setting No.95 preset position. Move up or down to point the cursor at 【TOUR SETTINGS】,and then move the joystick right to enter preset position touring menu of preset position(shown as Figure 27)

(3) Ways to define the touring of preset position as follows:

A) Move the cursor to 【NO.】. The setting area turns grey when moving the joystick to the right. Move the joystick up or down to set code, and then move the joystick left or right to exit the setting.

B) Move the cursor to 【INTERVAL TIME】， The setting area turns grey when moving the joystick to the right. Move the joystick up or down to set the interval time of preset positions , and then move the joystick left or right to exit the setting. The interval time ranges from 5 to 99 seconds.

C) Move the cursor to 【TITLE: TOUR NO1】. The setting area turns grey when moving the joystick to the

right. Move the joystick up or down to set touring title, and then move the joystick left or right to exit the setting. The touring title contains 8 characters at most, the supporting characters (0-9,A-Z blank)。

D) Move the cursor to 【PRESET POS NO. LIST】. The setting area turns grey when moving the cursor right to the setting area of touring 【XXX…XXX】. Move the joystick up or down to select preset position. When Moving the joystick left or right, the cursor will jump to the former or next position. The camera rotates through every preset position from the left to right or from up to down.。If the preset position is 0, it will automatically jump to next preset position that is not 0.

E) Move the cursor to 【SAVE】, When moving the joystick to the right,【SAVE TOUR】ending shows "xxx", When "xxx" disappears，it indicates that the current operation has been completed.。Note: xxx consists of tour code and interval time.

F) Move the cursor to 【RUN】, Move the joystick right to execute operating tour route and exit the menu.

10.Display setting

(1) All titles and displaying open/close on the screen can be set through 【DISPLAY SETINGS】. Once confirmed，the setting comes into use. It will the parameters you configured next time when the machine is on . Shown as Figure 28

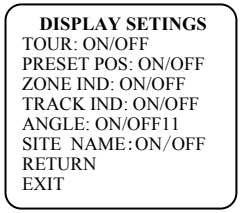


Figure （28）

11.Advanced Settings

Instruction：Only first through calling No.65 preset point or setting No.95 can all the other settings enter main menu of OSD. No further instruction. Main menu is shown as figure 22, while entering other submenu setting shown in Figure 29.

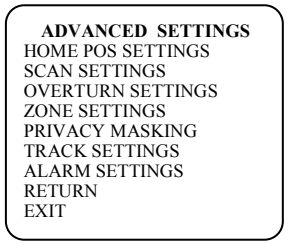


Figure (29)

12.Home position function

(1)The home position function is that dome cameras will automatically return to one important position that user presets when the operator is away for a long time. The home position will not be in use when the dome camera is moving.。You can set home position or its waiting time(3-254 seconds), ON or OFF through 【TIME】and【PRESET】 in the menu item:【HOME POS SETTINGS】

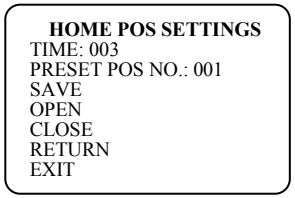


Figure (30)

13.Auto limit scan

Move the joystick up or down to choose the characters. After editing, move right or left till the last and the systems will save the settings automatically.

Notice: 8 English characters can be set in the title. As for the unnecessary characters, move the joystick right to skip them. As for the characters that need to be deleted, replace them with space. Move the joystick right to skip to the next character after editing each character.

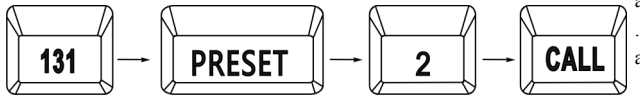
(3) Ways to operate the communication setting are as follows:

□ Two mode of speed dome communication :1, . protocol and baud rate are both auto-recognizable, and the address code uses SW2 switch of binary system. 2. Use soft address, protocol, baud rate ***(software configuration)*** and the setting of ***【COMM SETTING】*** in the menu. The specific way starts from A.

Notice: If user needs to shift ***(Software configuration)*** to auto-recognizable protocol, baud rate mode, call to ***140*** preset position.

□ If there are no OSD menu of speed dome ,ways of setting software adress as follow:

Setting 131 preset ,so it can into setting software adress status , then using the way of calling preset to set the adress that you need. .such as :setting the adress 2 :



A）Move the joystick up or down as figure 22 shows, and then move the cursor to 【DOME SETTINGS】. Move the joystick right to enter sub-menu setting of the dome as figure 39 shows.

B）Move the joystick up or down as figure 39 shows, and then move the cursor to 【COMM SETTINGS】.Move the joystick right to enter the setting of dome address (dome number), protocol and baud rate.

C）Move the cursor to 【DOME ADDR】and the setting area turns grey when moving the joystick right. Move the joystick up or down set the dome address as figure 40 shows.

D）Move the cursor to 【PROTOCOL】and the setting area turns grey when moving the joystick right. Move the joystick up or down to set the protocol.

E）Move the cursor to 【BAUD RATE】and the setting area turns grey when moving the joystick right. Move the joystick up or down to set the baud rate.

F）After choosing the address, protocol and baud rate you want, move the cursor to 【TEST】. Start 120 seconds(2 minutes) countdown after moving the joystick right. Test and try the equipment control during the countdown, like the corresponding dome address of DVR, keyboard, etc, and the editing of protocol and baud rate. When the equipment control is well configured and the communication with dome is successful, move the joystick up/down or left/right, and test is completed when【OK】is displayed.

G) Move the cursor to 【SAVE】and move the joystick right. The settings of dome address, protocol and baud rate are saved when【OK】is displayed.

Note: 1. Speed dome camera debugging can not control, but can not determine the control device address settings or dome camera address, firstly dome camera address is set to 0 invalid address judgment and analysis. (dome camera for No. 0, all addresses can be controlled)

2. Communication settings if you do not remember the address before the dome camera can not control, you can use the 255 broadcast address.

18. Alarm Setting

(1) The machine can connect alarm inputs of 4 routes and alarm output of 1 route, conducting interactive alarm. External alarm signals the machine, and the machine will turn to the alarming places to take photos(calling preset position or starting preset position of touring ,routes record, etc)

【NO.】(1-4):1alarm code (1-4):1

【DISPLAY】:ON/OFF alarm display: on/off

【PRESET NO.】:001 preset position code:001

【TIME】:003 the alarm interval time:003,3 seconds at least

【ALARM】:ON/OFF alarm control: on/off

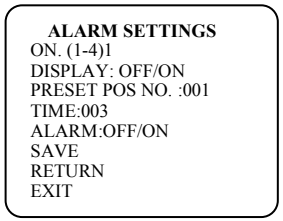


Figure (38)

(2) Ways to define the operation of routes recorder are as follows:

A）Move the cursor to 【NO.】, and the setting area turns grey when moving the joystick right. Move the joystick or down to set alarm code .At last move the joystick right or left to exit the setup.

B）Move the cursor to 【DISPLAY】and the setting area ON/OFF turns grey when moving the joystick right. When moving the joystick up or down to set an alarm, ON/OFF shows up on the screen.

C）Move the cursor to 【PRESET NO.】and the setting area turns grey when moving the joystick right. Move the joystick up or down to set interaction with alarm input. The options of interaction of alarm are as follows**:** preset position-99、preset position touring 100-104（matching with 1-5 touring）、tracking routes record 130-133（matching with 1-4 routes record）、Off setting is No.0 preset position。And then move the joystick right or left to exit the setting.

D）Move the cursor to 【TIME】and the setting area turns grey when moving the joystick right .Move the joystick up or down to set the interval time of preset position when setting some certain route input

E）Move the cursor to 【ALARM】and the setting area ON/OFF turns grey. When moving the joystick right, move the joystick up or down to match with the ON/OFF setting of alarm input code

F）Move the cursor to 【SAVE】and save the current setting after all the above operation.

19.Dome Settings

(1) Language choice:

English and Chinese menu are available; this function can be saved even if the power is off.

(2) Ways to edit the dome titles:

A) When using several speed domes, in order to tag each speed dome, this system provide tagging setting function of dome. The ways are as follow:

B) Move the joystick up or down as figure 22 shows, and then move the cursor to 【DOME SETTINGS】. Move the joystick right to enter sub-menu setting of the dome as figure 39 shows.

C) Move the joystick up or down as figure 39 shows, and then move the cursor to 【DOME TITLE】. Move the joystick right to enter title setting, and the characters of title which cursor indicates turns grey.

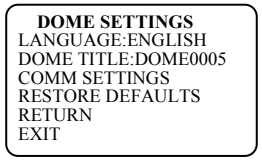


Figure (39)

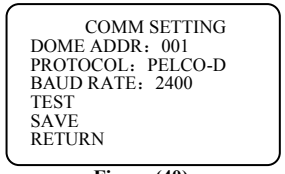


Figure (40)

【SET 1ST POINT】Set the first point, and call No.65 or No.1 back to menu after setting .

【SET 2ND POINT】Set the second point, and call No.65 or No.1 back to menu after setting .

【RUN】Execute limit scan

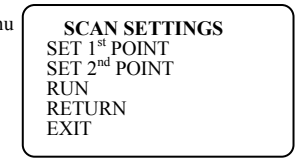


Figure (31)

(1) The operator can set left limit and right limit through 【SET 1st POINT】and【SET 2nd POINT】in the menu item:【SCAN SETTINGS】and achieve horizontal reciprocating scan at the speed of joystick's final movement between the left and right limit of cameras.

14.Auto Overturn

Figure (32)

(1) Move the joystick up or down to point the cursor to 【OVERTURN SETTINGS】. Move the joystick right to enter the setting of auto overturn and move the joystick up or down to select it. If selecting ON, it opens the auto overturn function，or if selecting OFF, it closes the auto overturn function. The set value can be switched between ON/OFF, and then move the cursor of the joystick left or right to return to 【OVERTURN SETTINGS】, and the auto overturn is done.

Note:：User can directly watch the back scene and achieve overall monitoring ,if use keeps pressing the joystick after connecting the lens to the bottom when the auto overturn function is on.

15.zone indication setup

【NO.(1-8)】:1 zone number(1-8):1

【TITLE】: ZONE 1 zone title:No.1 zone

【SET LEFT LIMIT POS】set left limit position , After setting , user need to call No.65or NO.1 preset position to return to menu mode.

【SET RIGHT LIMIT POS】set right limit position. After setting ,user need to call No.65or NO.1 preset position to return to menu mode.

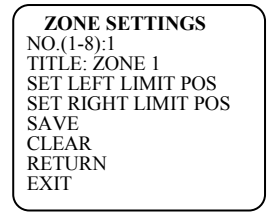


Figure (33)

(1) Firstly, through calling No.65 preset point or setting No.95 preset point it enters main menu of OSD. It displays the indicative title of this zone on the screen when the camera moves to this zone when 【DISPLAY SETINGS】(in the main menu)【ZONE IND】is【ON】; 8 zones at most can be set.

(2) Ways to define indicative zone are as follows:

A) Move the cursor to 【NO.】, and the setting area turns grey when moving the joystick right. Move the joystick up or down to set code, and then movie the joystick left or right to exit the setting.

B) Move the cursor to 【TITLE】and the setting area turns grey when moving the joystick right. Move the

joystick up or down to set area title, and then move the joystick left or right to exit the setting. The area title setting contains 8 characters at most, the supporting characters (0-9,A-Z, blank).

C) Move the cursor to 【SET LEFT LIMIT POS】and the setting area turns grey when moving the joystick right, and then move joystick and select left border, and later the cursor becomes white when calling No.65 or No.1 preset position.

D) Set the right border of the current area (the same as the above) Note: The effective area is the clockwise area between the left and right border.

E) Move the cursor to 【**SAVE**】 after finishing the operations mentioned above. and then move the joystick right to save the current area setting.

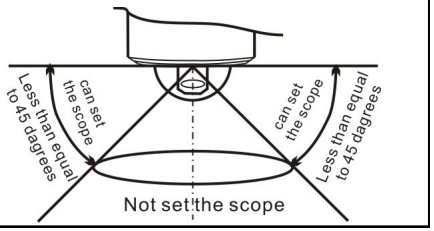
PRIVACY MASKING
NO.(1-8):1
SET ZONE POS
SET MASK POS
SET MASK SIZE
START
CLEAR
RETURN
EXIT

Figure (34)

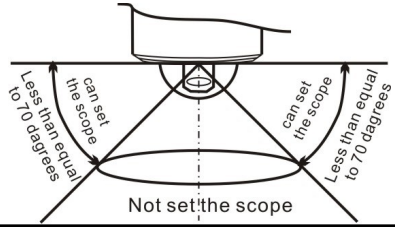
16.Privacy Masking setting

(1) Through invoking NO.65 preset position or setting No.95 preset position the system enters main menu of OSD . All of submenu setting must call main menu in advance. (Main menu is shown as Figure 22).The cursor will point at【PRIVACY MASKING】 by moving the joystick up or down, and then enter the menu of function setting by moving the joystick right (shown as Figure 34).You can set privacy masking in any position of the monitored area and set a privacy mask-

The setting range of HITACHI series camera shown as follows



The setting range of SONNY and SANYO series camera shown as follows



(2) Ways to define the privacy masking zone are as follows:

A) Move the cursor to 【NO.】, and the setting area turns grey when moving the joystick right. Move the joystick up or down to set code, and then movie the joystick left or right to exit the setting. Instruction: The machine will auto-call the privacy masking section that has been set well to the screen after finishing setting the code, if the corresponding privacy masking zone has been set well when setting privacy zone number.

B) Move the cursor to 【SET ZONE POS】, and then move the joystick right to show the selected privacy masking image on the screen. Call No.1 preset position and confirm it.

C) Move the cursor to 【SET MASK POS】, and then move the joystick right, and the privacy masking section will automatically appear on the center of the screen. If privacy masking section has been set in this area number ,it will directly jump to this step to continue the following operation.

D) Move the joystick up/down/left/right to adjust the position of privacy masking zone on the screen. Instruction: The privacy masking section will automatically move along with the direction of the joystick

after pressing the joystick for 2 seconds. Call No.1 preset position after setting the position, and the screen will be shown as Figure 35.

E) Move the cursor to 【SET MASK SIZE】and then move the joystick right .Move the joystick left or right to adjust the width of privacy masking section and move the joystick up or down to adjust the height of privacy masking section . Instruction :the height and width of privacy masking section will automatically increase or decrease along with the direction of the joystick after pressing the joystick for 2 seconds. Call the No.1 preset position to save the setting after finishing it and the screen will be shown as Figure 36.

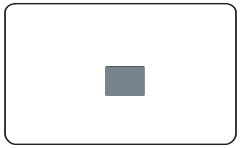


Figure (35)

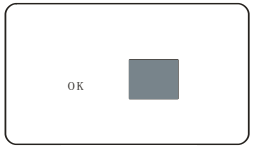


Figure (36)

F) Move the cursor to 【START】and then move the joystick right to enable the privacy masking of this area.

G) If you want to delete the privacy masking of the current area, move the joystick to point the cursor at 【CLEAR】, and then it can be deleted by moving the joystick to the right.

17.Tracking Routes Recorder

(1) This machine can record continuously the regular controlling of the operator to the PTZ and camera for one minutes at least. The dome camera will auto move back and forth with only one order. This machine just can save 4 rout.。

TRACKING SETTINGS
NO.(1-4):1
TITLE: TRACK 001
SET START POS
RECORD
SAVE
RUN
RETURN
EXIT

Figure (37)

(2) Way to define the operation of tracking records are as follows:

A) Move the cursor to【NO.】, and then move the joystick right and the content of setting zone turns grey. Move the joystick up or down to set tracking code, and then move the joystick left or right to exit the setting.

B) Move the cursor to【TITLE】, and then move the joystick right and the content of setting zone turns grey. Move the joystick up or down to set tracking title，and then move the joystick left or right to exit the setting. The tracking title contains 8 characters at most , the supporting characters((0-9,A-Z,blank)。

C) Move the cursor to【SET START POS】，and then move the joystick right to select the starting point that needs recording, and then call No.1 preset position to confirm it.

D) Move the cursor to 【RECORD】，and move the joystick right to start recording. It will appears “031” on the right .If you want to finish recording, you can call No.1 preset position to stop recording and return to menu.

E) Move the cursor to 【SAVE】，and move the joystick right to save the current tracking routes recording.

F) Move the cursor to 【RUN】and move the joystick to the side to operate continually the current tracking routes record .Any operation on the joystick can stop the recording.